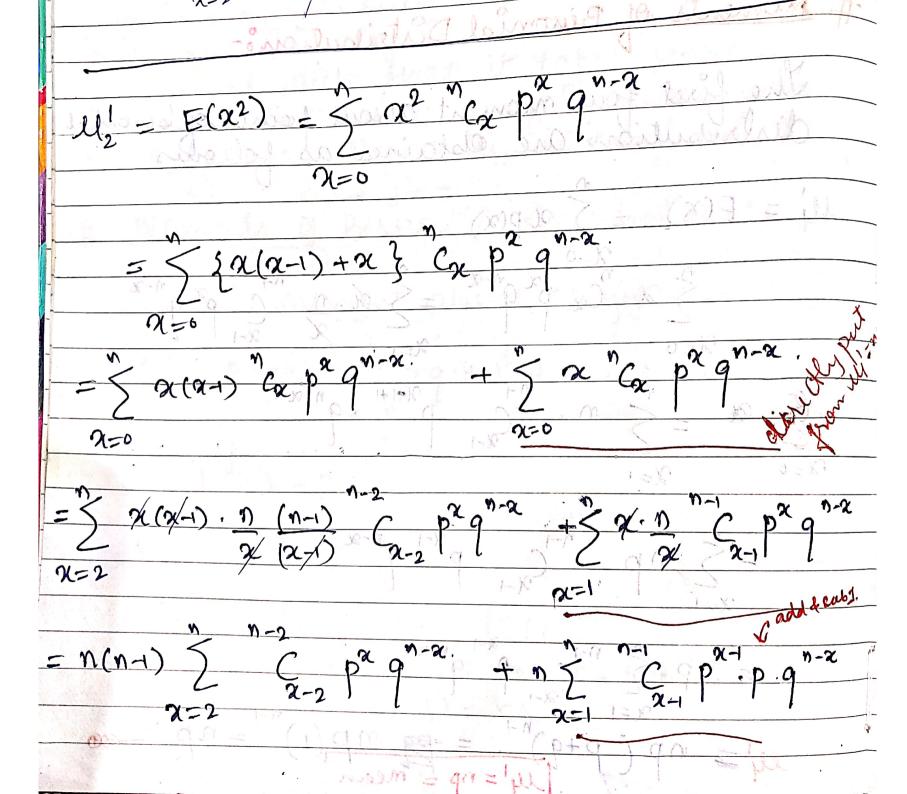
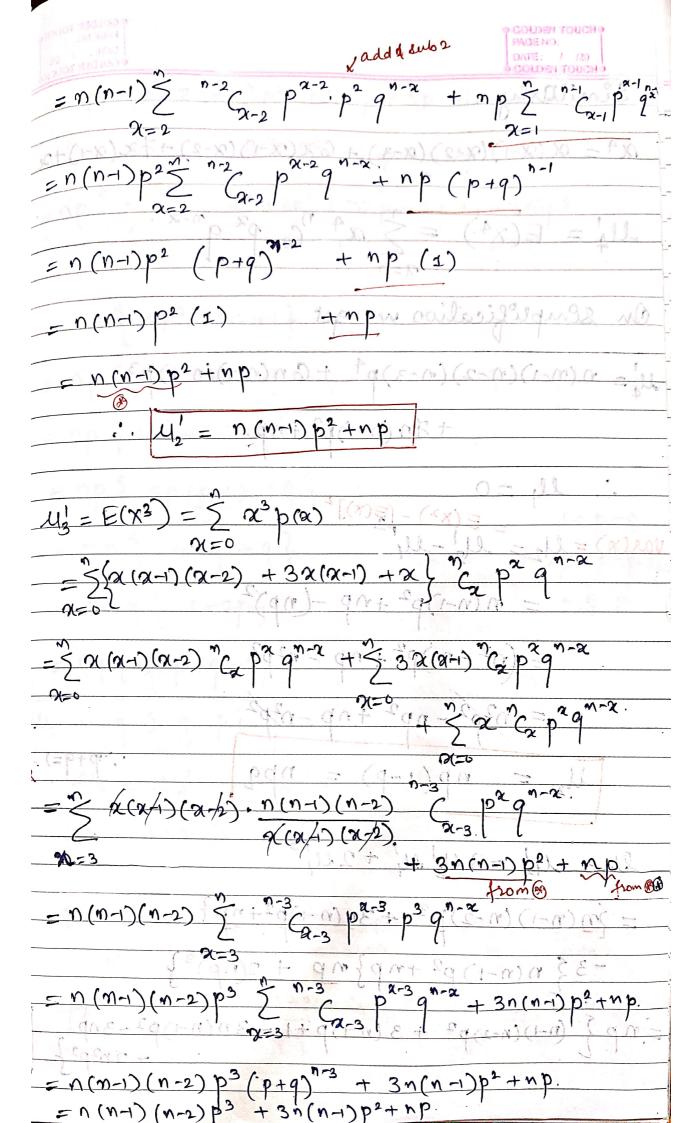
| # Binomial Distribution | |
|--|-----|
| | |
| Del? : A Sandom Variable X is said to follow | |
| binomial distribution if it assumes only. | , |
| Def : A Sandom Variable X is said to follow binomial distribution if it assumes only. non-negative values and its probability mass function is given by | , |
| mass function is given by | |
| | - |
| $P(X=x) = p(x) = ('Cx p^{2} q^{n-x} ; x=0,1,2,n.$ | |
| 1 0 5 (cm) (a + 10 1 x 9=1+12 3 (cm) | : |
| $P(\chi=\alpha) = p(\alpha) = ({}^{n}Cx p^{n-\alpha}, \gamma=0,1,2,n.$ $Q=1+p$ of themise | |
| | |
| of Moments of Binomial Distribution: | i. |
| | |
| The first four moment about point of binoni distribution are Ostained as follows: | al |
| distribution are Obtained as follows: | |
| N) | |
| $u' = E(x) = \sum x p(x)$ | |
| 3 < 50 (0, -1) + 36 % (0, 10 0 0 = X | |
| $= \frac{1}{2} $ | |
| $\chi = \chi = 0$ | • |
| Mary Services of the services | |
| $= \sum_{n=1}^{\infty} x_n = \sum_{n=1}^$ | |
| 0 = 0 | |
| $\chi = 0$ $\chi = 0$ | |
| 2 (0 - 1) (1 - 1) (| >= |
| 55 mp) (p 2-9 m-2 (x) x | |
| Edward 2=1 1-12 21-1 | CN. |
| 25-6 W. W. W. L. 3-1 Made | |
| pa=np5 Capanarosas Comana | 2 |
| 2 = 1 = x n E - E n | |
| $U = np(p+q)^{n-1} = pq np(1) = np - \infty$ | |
| 14'= np = mean | |





P+9=1.

Similarly.

 $MA = \alpha(x-1)(x-2)(x-3) + 6x(x-1)(x-2) + 7x(x-1) + 2$

$$\mathcal{U}_{4}' = E(X^{4}) = \sum_{\alpha=0}^{m} \alpha^{4} \mathcal{V}_{\alpha} p^{\alpha} q^{m-\alpha}.$$

edus pepo,

simplification we get

1= n(n-1)(n-2)(n-3)p4 + Gn(n-1)(n-2)p3

+ 7n (n-1) p2 + np.

$$\frac{1}{1000} = \frac{1}{1000} = \frac{1$$

(E(X)] 2 (N) (Vag(x) = llo =

w(n-1) bo + ub - (ub)

n2-n)p2+np=n2p3

 $-np^2 + np - n^2p^2$

np(1-p)

(n-1) (n-2) p3 + 3n(n-1) p2+np}

 $n(n-1)p^2 + np + 2(np)^3$

 $(n-1)(n-2)p^2 + 3(n-1)p+1 - 3n(n-1)p^2 - 3np$ CN+ FOCHMI

 $= np \left\{ (n^2 - 3n + 2) p^2 + 3np - 3p + 1 - 3n^2p^2 \right\}$ +3np2-3np+2n2p2 { 2-3mp2+2p2+3mp +3xp2-3xp+2n2p22 = np } 2p2-3p+1} +93 - 443 di + 6 li/1412

GOLDEN TOUCH . pg 8:15 Guptatkapoor It Momenta Generating Function of Binomial Let X n B(n,p), then